

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 28

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte LEE A. CARMAN
and SHUYUAN LIU

Appeal No. 1996-3472
Application 08/192,088

ON BRIEF

Before PAK, OWENS and WALTZ, **Administrative Patent Judges.**

WALTZ, **Administrative Patent Judge.**

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1 through 5 and 7. Claim 6 is the only remaining claim in this application and has been objected to by the examiner as depending on a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims (Answer, page 1).

According to appellants, the invention is directed to an abrasive tool which is a composite of sol-gel alumina abrasive grains bonded together by a glass-ceramic bond material, which composite has specified amounts of volume void spaces, volume of bond material at the bond posts or in the coating, and a volume proportion of bond to grain (Brief, page 2).¹

Illustrative claim 1 is reproduced below:

1. An abrasive tool that comprises sol-gel alumina abrasive grains bonded together by a glass-ceramic bond material, the tool comprising from about 35 to 65 % by volume void spaces, wherein at least about 75% of the volume of the bond material is located in the bond posts or in a coating on the abrasive grains and in which the volume proportion of bond to grain is from about 0.06 to 0.6.

The examiner has relied upon the following reference as evidence of obviousness:

Clark et al. (Clark), "A Novel Technique for Producing a Glass-Ceramic Bond in Alumina Abrasives," *Am. Ceram. Soc. Bull.*, **65**(11) 1506-12 (1986).

Appellants have relied upon the following references in rebuttal of the examiner's position:²

Rue	4,543,107	Sep. 24,
1985		

¹ All reference and citation is from the revised Brief dated Apr. 8, 1996, Paper No. 24.

² See the Brief, pages 2 and 7.

Appeal No. 1996-3472
Application 08/192,088

Cottringer et al. (Cottringer) 4,623,364
1986

Nov. 18,

Claims 1-5 and 7 stand rejected under 35 U.S.C. § 102(b) as anticipated by, or in the alternative, under 35 U.S.C. § 103 as unpatentable over Clark (Answer, page 3). We reverse these rejections by the examiner for reasons which follow.

OPINION

It is the examiner's position "that the burden is upon appellant [sic] to show by way of tangible evidence that the claimed abrasive tool does in fact have different properties ." (Answer, sentence bridging pages 3-4). However, it is well settled that the examiner bears the initial burden of presenting a *prima facie* case of unpatentability. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

The examiner has considered the claimed limitation "sol-gel" to be a process limitation which does not further limit the claimed product (Answer, page 4). Appellants argue that "sol-gel alumina abrasive grains" are described in the specification (page 6, lines 1-15) and are not a process limitation but a physically different grain than traditional

alumina abrasive grains (Brief, pages 2 and 8). In any anticipation or obviousness analysis, the claim must first be correctly construed to define the scope and meaning of each contested limitation. *Gechter v. Davidson*, 116 F.3d 1454, 1457, 1460 n.3, 43 USPQ2d 1030, 1032, 1035 n.3 (Fed. Cir. 1997).

Claims in an application are to be given their broadest reasonable interpretation consistent with the specification, and that claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art. *In re Sneed*, 710 F.2d 1544, 1548, 218 USPQ 385, 388 (Fed. Cir. 1983). Giving the broadest reasonable interpretation to the claimed term "sol-gel alumina abrasive grains" consistent with pages 5-6 of the specification, we agree with appellants that one of ordinary skill in the art would have interpreted this term to mean alumina with specific physical characteristics.³ As appellants point out on page 6 of the Brief, the examiner has failed to identify any

³ See also the meaning of sol-gel alumina abrasive grains as disclosed by the prior art, i.e., Rue and Cottringer.

disclosure or teaching in Clark of a sol-gel alumina abrasive grain.

Regarding the examiner's position that appellants have not shown that Clark does not *inherently* possess the properties of the claimed composite (Answer, page 4), we have discussed above that any such initial burden is born by the examiner. See *Oetiker, supra*. The examiner, if relying on a theory of inherency, must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flow from the teachings of the applied prior art. *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). On this record, the examiner has not provided any such support for an inherency theory.

For the foregoing reasons, we determine that the examiner has not shown that all of the claimed limitations are described in Clark within the meaning of 35 U.S.C. § 102(b). Accordingly, the rejection of the claims on appeal under 35 U.S.C. § 102 (b) is reversed.

The only statement the examiner has made regarding obviousness is that "[u]se of sol-gel grains if the process

limitation is given weight in determining the patentability would at least be obvious." (Answer, page 4). When determining the patentability of a claimed invention which combines two known elements, "the question is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination." *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1462, 221 USPQ 481, 488 (Fed. Cir. 1984); see also *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). The examiner has failed to show any suggestion, motivation or reasoning to use sol-gel alumina abrasive grains with the glass-ceramic product of Clark. The examiner has not taken official notice, used appellants' admissions in the specification, or employed Cottringer to support the conclusion of obviousness.⁴ The examiner has also failed to reply to appellants' reliance on Rue as "teaching away" from the claimed invention (see the Brief, page 7).

⁴ See the Answer, page 4, where the examiner explicitly states that Cottringer is not used in the rejection.

For the foregoing reasons, we determine that the examiner has not established a *prima facie* case of obviousness in view of Clark. Since we determine that no *prima facie* case has been presented, we need not reach the sufficiency of the comparative showing presented in appellants' specification (Brief, pages 7-8, citing Examples 2 and 3 on pages 12-18 of the specification).

In re Geiger, 815 F.2d 686, 688, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987). Accordingly, the examiner's rejection of the claims on appeal under 35 U.S.C. § 103 as unpatentable over Clark is reversed.

The decision of the examiner is reversed.

OTHER ISSUES

Upon the return of this application to the jurisdiction of the examiner, the examiner and applicants should review the admissions in the specification, the Rue and Cottringer patents, and the Clark article to determine whether there is any suggestion in the prior art as a whole to use glass-ceramic bonding, for the advantages taught by Clark with conventional alumina abrasives, with well known sol-gel alumina abrasive grains that have vitreous bonding, disclosed

Appeal No. 1996-3472
Application 08/192,088

as superior to conventional alumina by Rue and Cottringer. The examiner should also consider, in detail, the comparative data presented by appellants on pages 12-18 of the specification. Specifically, the examiner should determine if the variable firing schedule recited in Table III on page 13 of the specification would affect the results presented in Table IV on page 14 of the specification (see the sentence bridging pages 8-9 of the specification) and if all of the results for the example from Clark composition #4 are

truly unexpected (see the specification, pages 16 and Table VII on page 18).

REVERSED

CHUNG K. PAK)
Administrative Patent Judge)

Appeal No. 1996-3472
Application 08/192,088

)	
)	
)	
)	
)	BOARD OF PATENT
TERRY J. OWENS)	
Administrative Patent Judge)	APPEALS AND
)	
)	INTERFERENCES
)	
)	
)	
THOMAS A. WALTZ)	
Administrative Patent Judge)	

TAW/kis
Brian M. Kolkowski
NORTON COMPANY, I.P. Law Dept.
1 New Bond Street, MS 412-101
Box No. 15008
Worcester, MA 01615-0008